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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/699,722	11/03/2003	Chang Seok Kang	CU-3425 RJS	3531
26530	7590	06/17/2004	EXAMINER	
LADAS & PARRY 224 SOUTH MICHIGAN AVENUE, SUITE 1200 CHICAGO, IL 60604			NGUYEN, HIEP	
			ART UNIT	PAPER NUMBER
			2816	

DATE MAILED: 06/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/699,722	Applicant(s) KANG ET AL.	
	Examiner Hiep Nguyen	Art Unit 2816	

-- **Th MAILING DATE of this communication appears on th cover sheet with th correspondence address --**
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 November 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>03112003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Abstract

The abstract of the disclosure is objected to because the abstract has more than 150 words and contains more than one paragraphs. The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Correction and/or clarification is required.

Regarding claim 1, the recitation “voltage output means outputting a predetermined value of voltage for driving the sense amplifier to a node” is indefinite because it is not clear as to the “a predetermined value of voltage” is used to drive the sense amplifier as a supply voltage or this “a predetermined value of voltage” supplies a predetermined voltage to a node and this voltage is used to drive the sense amplifier. Claims 2-5 are indefinite because of the technical deficiencies of claim 1.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Birk (US Pat. 6,373,766).

Art Unit: 2816

Regarding claim 1, figures 3 and 4 of Birk shows an apparatus generating a driving voltage for sense amplifier (120') in a memory device, the apparatus comprising:

voltage output means (120) outputting a predetermined value of voltage (VBLP) for driving the sense amplifier to a node;

a first core voltage step-up means (TS) connected between a power supply (VCP) and the node (BL); and

a second core voltage step-up means (TD) connected between the power supply (VCP) and the node,

wherein the first and second core voltage step-up means are turned on in sequence to elevate the voltage level of the node connected with the sense amplifier up to the level of the power supply (see col. 4, lines 21-65) and figure 4).

Regarding claim 2, the first core voltage step-up means (TS) includes a first transistor, the second core voltage step-up means (TD) includes a second transistor, the first core voltage step-up means is enabled response to a "bank active signal" (WLLi) and the second core voltage step-up means is enabled in response to a sense amplifier enable-signal (DLL).

Regarding claim 4, figure 4 of Birk shows that the voltage output means (120) are inoperative when the first core voltage step-up means is enabled. Note that at time t7, the output voltage means is inoperative when signal (ZL) is low and the first core voltage step-up means (TS) is enabled when signal (WLL) is high.

Regarding claim 5, it is inherent that the voltage output means are arranged corresponding to each of banks in the memory device because the sense amplifier (120') controls the bit lines of a bank in the memory device.

Allowable Subject Matter

Claim 3 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claim 3 would be allowable because the prior art of record fails to teach or fairly suggest a first core voltage step-up means comprises a transistor that is smaller than the transistor of the second core voltage step-up means.

Art Unit: 2816

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hiep Nguyen whose telephone number is (571) 272-1752. The examiner can normally be reached on Monday to Friday from 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on (571) 272-1740. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hiep Nguyen

06-15-04



TUAN T. LAM
PRIMARY EXAMINER